REMARKS:

This is further to our amendment filed June 8, 2009.

The Applicant thanks the Examiner for their telephone conversation of August 17, 2009. During this conversation the examiner identified US published application No. 2003/0214803 to Ono et al, (which has not been formally cited in this application) as relevant to claim 2 and others, while acknowledging that claim 24 is allowable. Applicant's undersigned attorney discussed differences between Ono et al. and claims 2 and 3. As also discussed, upon further review of the previous amendment, the Applicant notes that they inadvertently omitted the phrase "wherein the front of said heat sink" from claim 2, and have reintroduced this phrase, which existed in the prior claim set. With this correction the claims should be allowed.

The Examiner has expressed some concern over the phrase "is configured to receive" and accordingly, that phrase has been amended to read "receives".

Applicant requests that these amendments be entered to place the claims in intended form for allowance or appeal and the following comments considered relative to Ono et al.

In the telephone conversation, the Examiner acknowledged that the claims as now presented are not anticipated by Ono et al, because where the heat sink seat for the light emitting device meets the mounting surface, Ono et al., provides a convex mounting surface 3A; Figure 2, and a concave heat sink seat 102, while the present application provides the opposite, namely a convex surface on the heat sink seat, and a concave surface at the mounting surface. The Applicant herein explains why "inverting" the convex and concave surfaces to arrive at the present invention is not possible and would not be an obvious exchange of parts.

First, the Applicant would like to point out that, by the technology used by Ono et al, one could not exchange the convex and concave surfaces. Secondly, by the concave and convex surface in the present invention, the present inventors have arrived at a very different apparatus, which uses a different technology for heat dissipation, and which provides several advantages over the technology of Ono et al.

1) Mechanism of heat dissipation.

Ono et al uses a heat pipe technology. Having regard to the lighting assembly set out in Figure 1 of the present application, the Examiner will appreciate that a heat pipe technology could not be used in association with the present invention. Swiveling the heat sink seat in the mounting would cause the heat pipe to bend and break because the heat pipe must be anchored to a heat sink.

Accordingly, the present invention does not and cannot use a heat pipe. Instead, the present invention uses the mass of the heat sink seat to dissipate heat radially outwardly from the light to the heat sink seat and subsequently to the mounting. In contrast, the assembly of Ono et al moves heat radially inward from 102 to 3A. Because it is moving radially inwardly from the larger portion of the radius to the smaller portion of the radius, Ono et al would not work as a mass heat sink by normal dissipation of heat. Instead, a heat pipe is needed.

In summary, the mechanism and apparatus of Ono et al., cannot be adopted, modified, or inverted to obtain the mechanism and apparatus of the present invention.

2) Strength/resilience of the apparatus.

Ono et al requires a heat pipe, which is fragile and difficult to manufacture. Heat pipes are thin tubes containing a vacuum, fluid or gas. Heat pipes cease to function if the tube is ruptured and the gas, fluid or vacuum lost. Heat pipes are fragile and difficult to manufacture and are thus inappropriate in a moving structural component subject to the forces inherent in movable lighting assemblies.

In contrast, the present invention allows for the use of blocks (heat sink seats) as both the heat sinks and the movable portions of the apparatus. This is not possible with Ono et al. Ono et al could not be modified to generate this form or function.

Ono uses two mechanical methods to provide articulation, one being the ball swivel and the other being the hinge.

The ball swivel, by its nature has limited mobility and range as it must be contained by some mechanical device (e.g. 104b of Ono's front page drawing). This complicated assembly would be difficult to manufacture to required tolerances and would, in finished form, apply mechanical stress to the thin wall and delicate mould of the heat pipe. This is because a degree of pressure is required to hold the large mass of 102, 102A, 102B, 103A and 4 in place over the life of the assembly and to provide a firm close fit to assist in the conduction of heat through the very small area of contact (point of thermal resistance). Obviously, the use of a thermally conductive grease would not improve the stability (grip) of the assembly. Rather, it would increase the degree of pressure required to hold the large mass in place.

The hinge of Ono (similar to a standard door hinge) suffers from the same mechanical problems inherent in the ball swivel. The application of enough force to secure the unit in place (via a friction or interference fit) would threaten the integrity of the tube used in construction of the heat pipe.

In contrast, the present invention is much simpler in construction (only two parts) and much more robust. With the present invention there is no risk of catastrophic failure during or after adjustment and no amount of securing force would negatively affect it. Original and repeated field (end user) aiming is possible. Furthermore, Ono et al cannot be modified to produce these improved strength and resilience of the present invention, because it requires the use of the heat pipe.

3) Aperture/focal point and mobility and range

When the LED of Ono et al is pivoted, its aperture and/or lens must also be pivoted. Thus, as shown in Figure 1b, the entire light fixture must be pivoted for Ono to function. In contrast, by mounting the heat sink seat of the present invention on a concave mounting surface, the focal point and aperture point of the light remains the same no matter how it is pivoted (see, e.g. Figure 10). The entire fixture does not have to be pivoted, only the seat. This allows for a simpler construction and more versatile design.

Thus, the entire light fixture must be secured in a fixed orientation to the LED, using the

teachings of Ono et al. Thus, the entire fixture can only be pivoted about 5-15 degrees maximum. It is known in the lighting industry that a bulb type pivot can only pivot maximum of about only 5-15 degrees due to interference (see, for example, part 104B, as well as part 16 in Figure 1B). In contrast, the present invention can be easily used to pivot 90 degrees or more (see, e.g. Figure 4).

In conclusion, Ono et al cannot be modified by interchanging the convex and concave surfaces to arrive at the present invention. Furthermore, Ono cannot be modified in any way to provide the improvements of the present invention over Ono et al, set out above. Accordingly, it is respectfully submitted that there is no prima facie obviousness case.

Respectfully submitted,

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